# AUTHOR INDEX, VOLUME XLVI


Adachi, H.: see Miyake, A.
Ahlbeck, R. A.: see Beredjick, N.
Aramaki, T.: see Takayanagi, M.
Beredjick, N., Ahlbeck, R. A., Kwei, T. K., and Ries, H. E., Jr.: Differentiation of stereoregular polymethyl methacrylates by the film-balance technique, 268
Berenbaum, M. B.: see Gobran, R. H.
Bovey, F. A.: Polymer NSR spectroscopy. III. The rates of the propagation steps in the isotactic and syndiotactic polymerization of methyl methacrylate, 59
Buck, O. G.: see Uraneck, C. A.
Bullough, R. K.: Birefringence and light scattering of high polymers, 517
Burbank, R. D.: Molecular chain folding in linear polyethylene, 256
Caldwell, R. G., and Ihrig, J. L.: On the mechanism of polymerization retardation by hydroquinone, 507
Chûjô, R.: see Miyake, A.
Cole, E. A., and Holmes, D. R.: Crystal lattice parameters and the thermal expansion of linear paraffin hydrocarbons, including polyethylenes, 245
Conway, B. E.: Studies on polyoxypropylene glycols. Part IV. Elastic properties of derived elastomers, 129
——, and Lakhanpal, M. L.: Studies on polyoxypropylene glycols. Part II. Derived thermodynamic functions for the systems: polyglycols–methanol, 93
——, and Tong, S. C.: Studies on polyoxypropylene glycols. Part III. Equilibrium swelling of crosslinked polyurethane elastomers, 113
——: see Lakhanpal, M. L.
Cox, W. P.: see Newman, S.
Davis, B.: see Wiley, R. H.
Dobler, M.: see Elias, H.-G.
Donnet, J.-B., and Henrich, G.: Polymérisation thermique du styrène en presence de noir de carbone, 273
Dunphy, J. F., and Marvel, C. S.: Vinyl octadecyl ether copolymers, 542
Ebert, P. E., and Price, C. C.: Polyethers. X. Endgroups in polyethylene oxide, 455
Eisenberg, A., and Tobolsky, A. V.: Equilibrium polymerization of selenium, 19
Elias, H.-G., Dobler, M., and Wyss, H.-R.: Zur Bestimmung der Taktizität von Hochpolymeren in gelöstem Zustand, 264
Feldman, C. F., and Perry, E.: Active centers in the polymerization of ethylene using titanium tetrachloride–alkylaluminum catalysts, 217
Fellmann, R. P.: see Goode, W. E.
Foster, J. F.: see Killion, P. J.
Frisch, H. L.: see Lundberg, J. L.
Funt, B. L., and Williams, F. D.: Inhibition and retardation of polymerization of methyl methacrylate, 139
Gillespie, T.: The viscosity of concentrated polymer solutions, 383
Gobran, R. H., Berenbaum, M. B., and Tobolsky, A. V.: Bulk polymerization of isoprene: kinetic constants from the dead-end theory, 431
Goode, W. E., Owens, F. H., Fellmann, R. P., Snyder, W. H., and Moore, J. E.: Crystalline acrylic polymers. I. Stereospecific anionic polymerization of methyl methacrylate, 317
Grossman, P. U. A.: Distribution of discrete relaxation times, 257
Haas, H. C., and Makas, A. S.: A note on syndiotactic polyvinyl alcohol, 524
Ham, G. E.: Idealized helical stereospecific polymerization, 475
Hardisty, D. R., and Neale, S. M.: The use of permselective membranes to determine the activity of the counterion in some polyelectrolyte solutions, 195
Hellman, M. Y.: see Lundberg, J. L.
Henrich, G.: see Donnet, J.-B.
Higashimura, T.: see Okamura, S.
Hoashi, K.: see Takayanagi, M.
Holmes, D. R.: see Cole, E. A.
Hsieh, H. L.: see Uraneck, C. A.
Hyndman, D., and Origlio, G. F.: NMR study of oriented Dacron fibers, 259
Ihrig, J. L.: see Caldwell, R. G.
Katchalsky, A.: see Oplatka, A.
Kawai, W., and Tsutsumi, S.: Vinyl polymerization catalyzed by triethylaluminum, *n*-butyllithium, and boron trifluoride etherate, 277
Kennedy, J. P., and Thomas, R. M.: Polymerization of isobutene in homogeneous systems, 233
——, and ——: Heterophase polymerization of isobutene with aluminum chloride catalyst solutions, 481
Killion, P. J., and Foster, J. F.: Isolation of high molecular weight amylose by dimethylsulfoxide dispersion, 65
Kumins, C. A., and London, A.: The electrochemistry of vinyl polymer membranes, 395
Kwei, T. K.: see Beredjick, N.
Lakhanpal, M. L., and Conway, B. E.: Studies on polyoxypropylene glycols. Part I. Vapor pressures and heats of mixing in the systems: polyglycols–methanol, 75
——: see Conway, B. E.
Lakshminarayanaiah, N.: Measurement of electrical conductivity of crosslinked ion-exchange resins by d. c. method, 529

Lewin, M.: see Mejzler, D.
Lindsley, C. H.: Preparation of density-gradient columns, 543
London, A.: see Kumins, C. A.
Lundberg, J. L., Hellman, M. Y., and Frisch, H. L.: The study of the polydispersity of polymers by viscometry, 3
McGary, C. W., Jr.: Degradation of poly(ethylene oxide), 51
Maron, S. H., Wang, M.-M., and Nakajima, N.: A theory of the thermodynamic behavior of nonelectrolyte solutions. IV. Application to low molecular weight systems, 333
Marvel, C. S.: see Dunphy, J. F.
——: see Otsu, T.
Matsumoto, M., and Ohyanagi, Y.: Viscosity-molecular weight relationship for polyvinyl acetate, 441
——, and ——: Linearity of low conversion polyvinyl acetate, 520
Mejzler, D., Schmorak, J., and Lewin, M.: A contribution to the study of random degradation of chain polymers, 289
Mendelson, R. A.: High pressure polyethylene molecular dimensions as estimated from solution properties of whole polymers, 493
Michaeli, I.: see Oplatka, A.
Miller, R. L., and Nielsen, L. E.: On the characterization of stereoregular polymers. I. Theory, 303
Miyake, A.: Local regularity of chain substances. II, 169
——, and Adachi, H.: Local regularity of chain substances. III, 177
——, and Chûjô, R.: Local regularity of chain substances. I, 163
Moore, J. E.: see Goode, W. E.
Mulvaney, J. E.: see Otsu, T.
Nakajima, N.: see Maron, S. H.
Neale, S. M.: see Hardisty, D. R.
Newman, S., and Cox, W. P.: The glass temperature of semicrystalline polymers, 29
Nielsen, L. E.: see Miller, R. L.
O'Driscoll, K. F., and Richezza, E. N.: Polymerization with redox initiators. III. Complex formation between benzoyl peroxide and dimethylaniline, 211
Ogata, N.: The transition polymerization of acrylamide in the presence of Grignard reagents, 271
Ohyanagi, Y.: see Matsumoto, M.
Okamura, S., and Higashimura, T.: Stereospecific polymerization of styrene and methyl methacrylate catalyzed by metallic sodium, 539
Oplatka, A., Michaeli, I., and Katchalsky, A.: Thermoelasticity of open systems, 365
Origlio, G. F.: see Hyndman, D.
Otsu, T., Mulvaney, J. E., and Marvel, C. S.: The structure of polydiacrylylmethane, 546
Owens, F. H.: see Goode, W. E.
Perry, E.: see Feldman, C. F.
Peterlin, A., and Pirkmajer, E.: Temperature dependence of NMR absorption spectra of polyethylene, 185
Pirkmajer, E.: see Peterlin, A.
Price, C. C.: see Ebert, P. E.
Rao, V. S. R.: see Varadaiah, V. V.
Rehner, J., Jr.: Literature references to values of the polymer–solvent interaction parameter, 550
Richezza, E. N.: see O'Driscoll, K. F.
Ries, H. E., Jr.: see Beredjick, N.
Saltman, W. M.: A kinetic mechanism for the heterogenous stereospecific polymerization of propylene, 375
Schmorak, J.: see Mejzler, D.
Schroeder, J. P.: The reaction of phosphorus pentachloride with SBR rubber, 547
Seed, J. R.: see Volman, D. H.
Simons, J. R.: see Volman, D. H.
Snyder, W. H.: see Goode, W. E.
Sterling, C.: see Volman, D. H.
Takayanagi, M., Aramaki, T., Yoshino, M., and Hoashi, K.: Mechanism of viscoelastic absorption in polyethylene at higher temperatures than room temperature, 531
Thomas, R. M.: see Kennedy, J. P.
Tobolsky, A. V.: see Eisenberg, A.
——: see Gobran, R. H.
Tong, S. C.: see Conway, B. E.
Tsutsumi, S.: see Kawai, W.
Tung, L. H.: Melt viscosity of polyethylene at zero shear, 409
Uraneck, C. A., Hsieh, H. L., and Buck, O. G.: Telechelic polymers, 535
Varadaiah, V. V., and Rao, V. S. R.: Theoretical evaluation of the flory universal constant, 528
Vogl, O.: The polymerization of aldehydes, 261
Volman, D. H., Simons, J. W., Seed, J. R., and Sterling, C.: Sorption of water vapor by starch. Thermodynamics and structural changes for dextrin, amylose, and amylopectin, 355
Wang, M.-M.: see Maron, S. H.
Wiley, R. H., and Davis, B.: Tracer techniques for the determination of monomer reactivity ratios. III. Ionization chamber assay and the reactivity ratios for the styrene/*p*-methylstyrene copolymerization, 423
Williams, F. D.: see Funt, B. L.
Wyss, H.-R.: see Elias, H.-G.
Yoshino, M.: see Takayanagi, M.
Zimmerman, J.: Degradation and crosslinking in irradiated polyamides and the effect of oxygen diffusion, 151

# SUBJECT INDEX, VOLUME XLVI

Acrylamides, transition polymerization, 271
Acrylic polymers, stereospecific anionic polymerization, 317
Aldehydes, polymerization, 261
Amylopectin, sorption of water vapor, 355
Amylose, isolation, 65
  sorption of water vapor, 355
Aluminum chloride solutions, in isobutene polymerization, 481
Benzoyl peroxide, dimethylaniline complex formation, 211
Birefringence, and light scattering, 517
Boron trifluoride etherate, in vinyl polymerization, 273
Bulk polymerization, isoprene, kinetic constants, 431
*n*-Butyllithium, in vinyl polymerization, 273
Carbon black, in thermal polymerization of styrene, 277
Catalysts, ethylene polymerization, 217
Chain polymers, random degradation, 289
  local regularity, 163, 169, 177
Counterion activity, polyelectrolyte solutions, 195
Crosslinking, irradiated polyamides, 151
Crystal lattice parameters, linear paraffin hydrocarbons, 245
Crystalline polymers, acrylic, 317
Dacron fibers, oriented, NMR spectra, 259
Dead-end theory, in bulk polymerization of isoprene, 431
Degradation, chain polymers, 289
  irradiated polyamides, 151
  polyethylene oxide, 51
Density-gradient columns, preparation, 543
Dimethylaniline, benzoyl peroxide complex formation, 211
Dimethylsulfoxide, in amylose isolation, 65
Dextrin, sorption of water vapor, 355
Elastomers, elastic properties, 129
Electrochemistry, vinyl polymer membranes, 395
Endgroup analysis, polyethylene oxide, 455
Equilibrium polymerization, selenium, 19
Equilibrium swelling, crosslinked polyurethane elastomers, 113
Ethylene, active centers in polymerization, 217
Flory constant, evaluation, 528
Glass temperature, semicrystalline polymers, 29
Grignard reagents, in transition polymerization of acrylamides, 271
Heats of mixing, polyglycol–methanol systems, 75
Helical stereospecific polymerization, 475
Heterophase polymerization, isobutene, 481
Hydroquinone, polymerization retardation, 507
Ion exchange resins, electrical conductivity, 529
Isobutene, heterophase polymerization, 481
  polymerization in homogeneous systems, 233
Isoprene, bulk polymerization, 431
Light scattering, and birefringence, 517
Local regularity, chain substances, 163, 169, 177
Melt viscosity, polyethylene, 409
Membranes, permselective, in counterion activity determination, 195
  vinyl polymer, electrochemistry, 395
Methyl methacrylate, inhibition of polymerization, 139
  isotactic and syndiotactic, polymerization, 59
  polymerization retardation, 139, 507
Methyl methacrylate, stereospecific polymerization, 317, 539
*p*-Methylstyrene, reactivity ratios, copolymerization with styrene, 423
Molecular chain folding, linear polyethylene, 256
Molecular dimensions, high pressure polyethylene, 493
Molecular weight, polyvinyl acetate, relation to viscosity, 441
NMR spectra, oriented Dacron fibers, 259
  polyethylene, 185
Nonelectrolyte solutions, thermodynamic behavior, 333
NSR spectroscopy, polymethyl methacrylate, 59
Open systems, thermoelasticity, 365
Phosphorus pentachloride, reaction with SBR rubber, 547
Polyamides, irradiated, degradation and crosslinking, 151
Polydiacrylylmethane, structure, 546
Polydispersity, viscometric study, 3
Polyethers, end groups, 455
Polyethylene, crystal lattice parameters, 245
  high pressure, molecular dimensions, 493
  linear, molecular chain folding, 256
  melt viscosity, 409
  NMR absorption spectra, 185
  viscoelastic absorption, 531

Polyethylene oxide, degradation, 51
endgroup analysis, 455
Polymer–solvent interaction parameters, 550
Polymethyl methacrylate, NSR spectra, 59
stereoregular differentiation, 268
Polyoxypropylene glycols, 75, 93, 113, 129
Polyurethane elastomers, equilibrium swelling, 113
Polyvinyl acetate, linearity, 520
viscosity–molecular weight relation, 441
Polyvinyl alcohol, syndiotactic, 524
Propylene, heterogeneous stereospecific polymerization, 375
Reactivity ratios, styrene/*p*-methylstyrene copolymerization, 423
Redox initiators, 211
Relaxation times, discrete, distribution, 257
SBR rubber, reaction with $PCl_5$, 547
Selenium, equilibrium polymerization, 19
Semicrystalline polymers, glass temperature, 29
Solutions, polymer, determination of tacticity, 264
viscosity, 383
Sorption, of water vapor by starch, 355
Starch, sorption of water vapor, 355
Stereoregular polymers, characterization, 303
syndiotactic, polyvinyl alcohol, 524
Stereoregular polymethyl methacrylates, differentiation, 268
Stereospecific polymerization, anionic, 317
idealized, 475
heterogeneous, propylene, 375
methyl methacrylate, 59, 539
styrene, 539
Styrene, reactivity ratios, copolymerization, with *p*-methylstyrene, 423
stereospecific polymerization, 539
thermal polymerization, 277
Tacticity, polymers in solution, determination, 264
Telechelic polymers, 535
Thermal expansion, linear paraffin hydrocarbons, 245
Thermal polymerization, styrene, 277
Thermodynamic behavior, nonelectrolyte solutions, 333
Thermoelasticity, open systems, 365
Transition polymerization, acrylamide, 271
Triethylaluminum, in vinyl polymerization, 273
Vapor pressure, polyglycol–methanol systems, 75
Vinyl octadecyl ether copolymers, 542
Vinyl polymer membranes, electrochemistry, 395
Vinyl polymerization, catalysis, 273
Viscoelastic absorption, polyethylene, 531
Viscometry, in study of polydispersity, 3
Viscosity, concentrated polymer solutions, 383
polyvinyl acetate, 441, 520